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a probe mechanism configured to generate and send a probe message over the particular communication path traversed by the packet for determination of statistics of the communications network.

2. (Twice Amended) The probing router of Claim 1, wherein the probe message is sent at time T1 and said probe mechanism is configured to receive a reply probe message at a second time, T2, sent by the destination node in response to receiving said probe message with a remote latency indicator therein so that service level agreement characteristics may subsequently be derived by comparing T1, T2 and the remote latency indicator.

3. (Twice Amended) The probing router of Claim 2, further comprising:  
a memory configured to store the service level agreement characteristics identified by the probe mechanism.

4. (Twice Amended) The probing router of Claim 1, wherein the particular communication path supports a tunnel channel in a virtual private network.

5. (Twice Amended) The probing router of Claim 2, wherein said reply probe message includes a data field specifying the remote latency indicator that represents an amount of time between when said destination node received said probe message and when said destination node sent said reply probe message.

6. (Twice Amended) The probing router of Claim 1, wherein a polling interval at which said probe mechanism sends said probe message is programmable.

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9. (Twice Amended) A computer-readable medium carrying one or more sequences of one or more instructions for sending a probe message, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

generating a probe message; and

sending said probe message over a communication path among a plurality of communication paths for transporting a packet to a destination node that is reachable by any one of the plurality of communication paths.

11. (Amended) The computer-readable medium according to Claim 10, wherein when the one or more instructions are executed by the one or more processors cause the one or more processors to further perform the steps of:

receiving at a second time, T2, a reply probe message sent from the destination node; and

extracting a remote latency indicator from said reply probe message, said remote latency indicator representing an amount of time between when said destination probing router received said probe message and when said destination node sent said reply probe message.

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12. (Twice Amended) The computer-readable medium of Claim 11, wherein when the one or more instructions are executed by the one or more processors cause the one or more processors to further perform the step of:

calculating service level agreement statistics associated with the particular communication path based on T1, T2, and said remote latency indicator.

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13. (Twice Amended) The computer-readable medium of Claim 9, wherein the plurality of communication paths is supported by a virtual private network.

14. (Twice Amended) A communication system for gathering traffic statistics, comprising:

a probing router configured to generate and send a probe message and prepare performance statistics information;

a probe poller processor configured to receive performance statistics information collected by a probing router that generates and sends a probe message over a communication path that transports a packet to a destination node that is reachable by any one of the plurality of communication paths; and

a reporting mechanism coupled to said probe poller processor and configured to present a compilation of said performance statistics information for comparison against performance thresholds of a service level agreement.

15. (Twice Amended) The system of Claim 14, wherein the plurality of communication paths is supported by a virtual private network.

16. (Twice Amended) The system of Claim 14, wherein said probing router is located within a customer premise.

18. (Twice Amended) The system of Claim 14, wherein said reporting mechanism is configured to report said performance statistics via a web interface.

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21. (Twice Amended) The system of Claim 14, wherein said probe poller processor is configured to calculate at least one of an availability and a packet loss rate of the communication path from said performance statistics information.

22. (Twice Amended) A probing router, comprising:

means for routing data packets to a destination router reachable over a plurality of communication paths within a virtual private network;

means for generating and sending a probe message over one of the plurality of communication paths to the destination router, the one communication path transporting the data packets; and

an enclosure that houses said means for routing and said means for preparing and sending.

23. (Twice Amended) A method for collecting network performance statistics, comprising the steps of:

generating a probe message for determining propagation time to a predetermined location; and

sending said probe message over a communication path that transports a data packet among a plurality of communication paths of a network, wherein the predetermined location is reachable via any one of the plurality of communication paths, wherein the propagation time is measured based on a reply message to the probe message.